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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,961	12/31/2001	Jai-young Kim	030681-349	5416
21839	7590	01/29/2004	EXAMINER	
BURNS DOANE SWECKER & MATHIS L L P POST OFFICE BOX 1404 ALEXANDRIA, VA 22313-1404			FALASCO, LOUIS V	
			ART UNIT	PAPER NUMBER
			1773	
DATE MAILED: 01/29/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

MK

Office Action Summary	Application No.	Applicant(s)	
	10/029,961	KIM, JAI-YOUNG	
	Examiner Louis Falasco	Art Unit 1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 23 October 2003.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-15 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-15 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 a) The translation of the foreign language provisional application has been received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ .
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .	6) <input type="checkbox"/> Other: _____ .

PAPERS RECEIVED

Applicants Information Disclosure Statement received 03/12/03 is acknowledged as paper 5.

Applicants Extension of Time received 10/23/03 is acknowledged as paper 6.

Applicants Amendment received 10/23/03 is acknowledged as paper 7.

Applicants Translated priority Document received 10/23/03 is acknowledged as paper 8.

Applicants Declaration under 37 CFR 1.131 received 12/19/03 is acknowledged as paper 9.

ACTIONS

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Applicant's arguments Declarations and Amendments are acknowledged.

The examiner no longer maintains rejections made in the Previous Office Actions and arguments made against them are now moot in view of new grounds of rejection made in this action.

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Statutory Basis

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless. -

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

REJECTIONS

Lack of Enablement

Claims 1 to 6, 7 to 9 and 11 to 15 are rejected under 35 U.S.C. 112, first paragraph.

The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

The breadth of enablement is not commensurate in scope with the subject matter being claimed.

Claims 1 to 6, 7 to 9 and 11 to 15 embrace subject matter not described in the specification in such a way as to enable one of ordinary skill in the art to make and use the invention.

The instant disclosure fails to teach the ordinary skill worker in the art the myriad possibilities which would fulfill the thickness in the range where the ratio of perpendicular coercivity - to - maximum perpendicular coercivity decreases with reduced thickness of the perpendicular magnetic recording layer as claimed and that the soft magnetic layer and the perpendicular magnetic layer form closed magnetic loops as claimed without undue experimentation in the unpredictable recording disk art.

The skilled artisan is given insufficient direction and guidance in the disclosure to practicing the wide breadth of this invention.

In the instant application the sum of direction presented are a comparatively few working examples. The instant examples 1-4 provided in the disclosure of the invention are very narrow compared with the exceptionally wide breadth of the claims under consideration. The myriad possibilities which would fulfill the size and component possibilities within the range where the ratio of perpendicular coercivity - to - maximum perpendicular coercivity decreases with reduced thickness of the perpendicular magnetic recording layer and that the soft magnetic layer and the perpendicular magnetic layer form closed magnetic loops do not bespeak a routine course to discover when considering the possible combinations and permutations satisfying the requirements, but appear of extensive experimentation and far-reaching development work to find what would achieve the subject matter here claimed.

"The test of enablement is whether one reasonably skilled in the art could make or use the invention from the disclosures in the patent coupled with information known in the art without undue experimentation." *United States v. Telectronics, Inc.*, 857 F.2d 778, 785, 8 USPQ2d 1217, 1223 (Fed. Cir. 1988)

There is no evidence that the reasonably skilled worker in the art could not make and use the breadth of the invention of from the instant disclosure coupled with information known in the prior art without undue amount of experimentation. Applicants have disclosed only a species of compositions and extents in an art that is unpredictable, hence requiring a complex, time-consuming procedure to identify compositions and materials and processes out of many possibilities in order to practice the invention within the scope of claims.

Given the lack of expectedness in the art, undue and extensive experimentation would be required for the direction in which the experimentation should proceed to attain the results in the claims and the specification does not provide a reasonable amount of guidance to one of ordinary skill to find out how to attain the results claimed.

"It is not enough that a person skilled in the art, by carrying on investigations along the line indicated in the instant application, and by a great amount of work eventually might find out how to make and use the instant invention. The statute requires the application itself to inform, not to direct others to find out for themselves." *In re Scarbrough*, 500 F.2d 560, 565, 182 USPQ 298, 301-02 (CCPA 1974)

Considering the lack of guidance in the instant specification for the breadth of the claims and the low level of predictability in the art, extrapolating to what has been claimed would require undue experimentation.

1. Claims 1 - 7 and 11- 15 are rejected as anticipated under 35 U.S.C. 102 (a or b) or in the alternate as obvious under 35 U.S.C. 103(a) over **Suzuki et al** (US 6641934).

Suzuki et al teaches the subject matter of these claims including a perpendicular magnetic recording disk having an under layer (item 40) an intermediate soft layer between the underlayer (item 30) and perpendicular recording layer (item 11). While **Suzuki et al** doesn't explicitly require a thickness in the range where the ratio of perpendicular coercivity – to – maximum perpendicular coercivity decreases with reduced thickness of the perpendicular magnetic recording layer nor that the soft

magnetic layer and the perpendicular magnetic layer form closed magnetic loops

Suzuki et al spells out the thickness of the layers may be determined as desired and is disclosed within applicants range (col. 4 lns 27, 28) - *cf* instant claim 7.

The perpendicular coercivity – to – maximum perpendicular coercivity and the soft magnetic layer and the perpendicular magnetic layer form closed magnetic loops is an unidentified property that the **Suzuki et al** appears to encompass, since they disclose the same structure materials and thickness as applicant.

The claiming of an unidentified property appearing inherently present does not necessarily make a claim patentable. Where claimed and prior art products have been shown to be substantially identical in structure or composition or produced by identical processes and a case of anticipation or *prima facie* obviousness has been established the burden of proof shifts to applicant to show prior art products do not necessarily nor inherently possess the characteristic of the claimed product - see In re Best, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977).

2. Claims 1 - 15 are rejected as anticipated under 35 U.S.C. 102 (a or b) or in the alternate as obvious under 35 U.S.C. 103(a) over **Hikosaka et al** (US 5942342).

Hikosaka et al teaches the subject matter of these claims including a perpendicular magnetic recording disk having an under layer (col. 3 ln 4) an intermediate soft layer between the underlayer (Fig 5 upper soft magnetic layer 12) and perpendicular recording layer (item 1). While **Hikosaka et al** doesn't explicitly require a thickness in the range where the ratio of perpendicular coercivity – to – maximum perpendicular coercivity decreases with reduced thickness of the perpendicular

magnetic recording layer nor that the soft magnetic layer and the perpendicular magnetic layer form closed magnetic loops **Hikosaka et al** spells out the thickness of the layers may be determined as desired and is disclosed within applicants range (col. 9 lns 53, col. 10 ln25, 26).

The perpendicular coercivity - to - maximum perpendicular coercivity and the soft magnetic layer and the perpendicular magnetic layer form closed magnetic loops is merely an unidentified property that the **Hikosaka et al** appears to encompass, since they disclose the same structure materials and thickness as applicant.

The claiming of an unidentified property appearing inherently present does not necessarily make a claim patentable. Where claimed and prior art products have been shown to be substantially identical in structure or composition or produced by identical processes and a case of anticipation or *prima facie* obviousness has been established the burden of proof shifts to applicant to show prior art products do not necessarily nor inherently possess the characteristic of the claimed product - see In re Best, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977).

CONCLUSION

The claims are 1 to 15.

- No claim has been allowed.
- Applicant has submitted a search report, these references have been considered and cited on the attached PTO-890 form since no Information Disclosure Statement form has been received.

INQUIRIES

Any inquiry concerning this communication from the examiner should be directed to examiner Louis Falasco whose telephone number is (703)305-6974 or (571)272-1507. The examiner can normally be reached M-F 9:30 AM - 6:00 PM.

- If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Paul Thibodeau may be reached at (703)308-2367 or (571)272-1516.
- The Fax phone numbers for the organization where this application or proceeding is assigned are: 703.872-9310 for regular communications and 703.872-9311 for After Final communications.
- An inquiry of a general nature or relating to status of this application or proceeding should be directed to the TC 1700 receptionist whose telephone number is 703.308-0651.

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12/03


STEVAN A. RESAN
PRIMARY EXAMINER